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Is single OM15 sufficient for screening of mid-facial fracture in the emergency setting of Ysbyty Gwynedd?

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Facial trauma is a common presentation to the emergency departments, together with clinical suspicion, radiological investigation are used as screening tools for detecting mid-facial fractures. Previous study has illustrated there is no significant difference between single OM15 degree's radiograph (sensitivity of 89.4%) and combined OM15+ OM30 degree's radiograph (sensitivity of 90.9%) in picking up mid-facial fractures. However in practice, both views are still widely used to ensure no missed fractures in the emergency department. As well known that there is a degree of damage from radiation to the exposed cells though there are more benefits from obtaining the facial radiographs that outweigh the slight damage may happen. Performing single OM view would definitely contribute toward reducing cost, radiation exposure and time spent by radiographers, however some clinicians feel that mid-facial fractures may be missed with single OM view. This study aims to demonstrate that a single OM 15 degrees radiograph is sufficient in picking up mid-facial fractures in emergency department setting for the purpose of screening.

Literature Review: There are five papers to date aimed identifying the best view to be used for screening of mid-facial trauma. Raby and Moore had determined that a lateral view did not add value to sensitivity in picking up mid-facial fracture. This result echoed the findings from Rogers et al that only one view is needed to identify fractures and more view can be requested in difficult cases. The economic benefits of using a single view was calculated by Sidebottom et al which extrapolated to 500 K saving on films alone for NHS. The two paper (Sidebottom et al and McGhee et al) that compare directly between OM15 and MO15/30 combined, both showed no significant change in sensitivity in picking up mid-facial fractures, therefore a single OM15 is enough.

Methods: In this retrospective study, we have looked at 2948 facial X-rays that were performed at Ysbyty Gwynedd and Llandudno general hospital, 61 facial X-rays have demonstrated mid-facial fractures, these scans were reviewed by two clinical radiologists and there was only one fracture that was not seen via OM15.

Results: This study has demonstrated that single OM15 is safe to use for the purpose of screening mid-facial fractures with sensitivity of almost 96%.

Biography

Amjed Eljaili completed his MBBS from University of Al-Zaiem Al-Azhari, Sudan in 2010. Currently, he is practicing at Ysbyty Gwynedd, BCUHB, Intensive Care Unit. He has attended several academic meetings regionally and participated in various national work-shops.

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